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Therapeutic Adherence in Patients with Diabetes Mellitus Non-insulin Dependent

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Abstract--- *The research arises from the empirical appreciation that there is insufficient therapeutic adherence by patients with non-insulin-dependent diabetes mellitus in the geographic area studied. Diabetes is considered a chronic, progressive and incurable disease, where the diagnosed individual is at risk of developing chronic complications at some point. The objective is to determine factors that intervene in the deficiency of therapeutic adherence in people with non-insulin-dependent diabetes mellitus and its repercussions on health. For the development of the investigation, the inductive-deductive method and the analysis-synthesis method were executed. It was determined that the greatest health determinant in the population of patients with non-insulin-dependent diabetes mellitus is the acquisition of healthy habits. They tend to omit failure to comply with treatment. The main reason for this is not to harm the doctor-patient relationship. Likewise, they minimize the level of adherence to healthy lifestyles. However, when pricing overweight, obesity or complementary test results, a different picture is reflected then that expressed in the consultation.*

Keywords--- *Metabolic Control, Quality of Life, Self-Care, Therapeutic Compliance, Therapeutic Regimen*.

I. INTRODUCTION

This work describes the factors that intervene in poor therapeutic adherence as well as the actions that the health team provides to patients diagnosed with non-insulin-dependent diabetes mellitus to achieve the desired success in the therapeutic regimen. It is important to emphasize the patient's behavior to identify the possible complications that occur due to not adhering to the treatment, since there are consequences that generate negative results at the clinical level for the patient; as well as repercussions for public health, and generate an expense to the state.

A problem facing the topic is the definition of the term adherence, due to the diversity of conceptualizations that exist, since these confuse, being very common to even observe expressions of ignorance in the health professionals themselves. The most used terms in the health branch to refer to adherence are obedience, cooperation, compliance, attachment (Villalobos Ríos *et al.*, 2017; Pawar, 2018; Nyandra *et al.*, 2018).

In medical praxis, the definition of therapeutic adherence is usually limited exclusively to the taking of medications by the patient. However, the issue must be considered from a broader point that includes measures such as changes in lifestyles and that these changes involve health personnel (Villalobos Ríos *et al.*, 2017; Suleiman *et al.*, 2019; Hayati, 2019).

The World Health Organization defines the term therapeutic adherence as the stage in which the patient

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generates responsible behavior, following the instructions prescribed by the doctor regarding the taking of measurements, changes in lifestyle and eating habits. , and in turn implies the recommendations provided by the multidisciplinary health team made up of the nurse, nutritionist, doctor, among others (Martín Alfonso *et al.,* 2014).

To focus on adherence, an importance level classification can be used; In this, the author mentions the patient's attitudes, among them: active attitudes, that is, when the patient has adequate treatment management and is interested in his well-being; passive attitudes are achieved when health personnel encourage the patient to adhere to a therapeutic plan achieving acceptance; the attitudes of resistance, that is, that the patient fails in the treatment because he hides the medication instead of taking it, and the attitudes of open rejection, that is, that the patient does not agree to take a medication, however, he takes it involuntarily (Martín Alfonso *et al.,* 2014; Puryana & Antarini, 2018; Suwitri & Sidiartha, 2018).

The situations in which the degree of patient behavior concerning treatment adherence can be observed are diverse. Some of them are involuntary acts, which are related to the misunderstanding or forgetfulness of the treatment. This is also known as unintentional non-adherence. However, the patient also decides to stop taking a drug voluntarily, this act is also known as intentional lack of adherence, which results from fear of adverse reactions, the complexity of the therapeutic regimen and perception of the absence of improvement or cure of their health without finishing the treatment (Krass *et al.*, 2015).

Health professionals, especially primary care physicians, must identify the causes of the deficiency of therapeutic adherence in patients with chronic diseases, detect it promptly, as well as use resources to be able to intervene effectively and on time, since it is a lot it is better to prevent than to treat the disease since the expense that represents the health system is greater (Krass *et al.,* 2015; Agarwal *et al.,* 2017; Malaiya *et al.,* 2017). For the nursing discipline, therapeutic adherence in patients with diabetes is a phenomenon with a complex nature, because it has an active implication in which the understanding of the behavior of the diabetic patient plays an important role, which will enhance the capacity for discernment and decision through consent (Salinas Cruz & Nava Galán, 2012).

The interaction of the patient as responsible for their state of health and the support of the health professional is essential, not only for the care they can provide but also taking into account the educational part, which is not only based on informing the patient Rather, the professional provides training that allows him to develop, promote himself and make the information become the motivation to face his illness. Health promotion by the healthcare professional must be based on five essential pillars: education, diet, lifestyle, medications, and self-management of glycemia (Barahona Tigua, 2019; Wiardani *et al.,* 2018; Kusumayanti & Dewantari, 2017). Non-communicable chronic diseases, including non-insulin dependent Diabetes Mellitus, are one of the main global problems in the public health field. This is probably due to the complexity of the therapeutic regimen that patients diagnosed with this problem must adopt. For this reason, therapeutic adherence in diabetic patients is considered as an unresolved problem, being the object of research interest (Orozco-Beltrán *et al.,* 2016; Suarjana *et al.,* 2017; Jain, 2017).

Diabetes mellitus is known as a chronic-degenerative disease, which originates as a result of various factors. Among the diversity, those such as lifestyles, environmental factors, and hereditary predisposition, mainly

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characterized by high glucose levels, are taken into account. Free in blood for prolonged periods, caused by the deficit in the secretion or action of insulin and manifested as a metabolic disorder of lipids, carbohydrates, and proteins (Rincón-Romero *et al.,* 2017). Diabetes mellitus is considered a worldwide epidemic. It is estimated that approximately 422 million people suffer from this disease and in the last 10 years, the prevalence of diabetic people has increased progressively (World Health Organization [WHO], 2016). Diabetes in Latin America is reportedly a high priority disease, due to the burden it places on society. The prevalence varies depending on the country, as in the case of Peru, which has the lowest number of patients with diabetes with 4.3%, the opposite occurs with Puerto Rico, the country with the highest figures at 15.4%, followed by Mexico with 11.7%, Chile with 10.3%, Argentina with 7.2% and Colombia with 6% of the population with diabetes (Agudelo-Botero & Dávila-Cervantes, 2015).

The National Institute of Statistics and Censuses (INEC) (2017) reported that in Ecuador diabetes mellitus has a prevalence that approaches 7% of the Ecuadorian population and that this pathology is the second leading cause of mortality in the country. When not treated promptly, diabetes mellitus represents a high cost for individuals and their families, as well as for the state's economy. In Latin America and the Caribbean, in the last 10 years the costs of diabetes increased to the US $ 65.2 billion, of which 83.6% were invested in disability and mortality caused by the disease, and the remaining 16.4% They were direct costs in medication, consultations, which reflects that health spending increases significantly due to wasted medical care, production and delivery of drugs that will not be used, medical appointments that are not carried out, as a result of which the pathology, increasing the number of hospitalization cases, surgical interventions, which implies a higher cost for public health treatment (WHO, 2016).

It is of vital importance to emphasize the search for methods that contribute to reducing the deficit of adherence to treatments since non-compliance is a determining factor in obtaining benefits that not only the drugs can provide the patient but also the type of healthcare provided to meet treatment goals (WHO, 2016). Several authors express that therapeutic adherence is modulated by the influence of some categories among them: those related to the patient, those related to treatment and those related to care. Other factors that are considered are the patient's cultural and social environment, increasing age, gender, frequency of medical visits, among others (Rincón-Romero *et al.*, 2017). Knowing what therapeutic adherence to a healthy lifestyle is will allow providing a set of actions by healthcare personnel to achieve success in treatment, as this will achieve better health results and a higher quality of life for patients, The approach to this disease is usually of great importance in the comprehensive health care model. Diabetes mellitus is one of the chronic non-communicable diseases with high prevalence rates, and one of the main causes of mortality worldwide according to established data from the World Health Organization (Mejía Flores, 2017; Mustika *et al.*, 2016; Pun, 2019).

The management of therapeutic adherence could be the key to achieving success in health intervention programs, which help to slow down and decrease the numbers of chronic non-communicable diseases in which diabetic patients find prevention and treatment, constitute a priority at the national level, so it infers on the many programs and actions that have been carried out in recent years. Without a doubt, all of them are necessary steps to try to control this health problem (Newball Noriega, 2015). For the state, health is a fundamental right of every individual, guaranteeing access to health services, despite this, the deficit in adherence to the therapeutic regimen each year increases especially in chronic non-communicable diseases such as diabetes mellitus, increasing the percentage of

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individuals with more relevant cases that could have been avoided if there had been strict control in their treatment (Gonzáles Herrera, 2015).

The success of adequate management in the population's health is that the patient adopts the necessary knowledge that allows them to proceed with their illness, this is achieved in conjunction with the health personnel and for this the continuity of health care is important, a problem has arisen due to discontent in the care received, and since patient satisfaction is an important indicator of the quality of services, it constitutes the key to improving health quality. The concern for patient satisfaction is conditioned, because it is oriented, significantly and progressively, with specific health behaviors, from compliance with medical prescriptions, monitoring of treatment and evaluation of results (Newball Noriega, 2015; Surya, 2019; Nindhom, 2019). The health houses have trained professionals to provide health care to patients with chronic non-communicable diseases, one of the key points in this research is training not only for the disease but for the patient, since each person reacts differently to the condition of their health, and in each one there is a predominant factor which affects adherence to the health sector (Gonzáles Herrera, 2015). Within the framework that constitutes health spending, more and more attention is paid to the consumption of drugs, a concern that concerns the people at the forefront of decision-making, health administrators, pharmacy personnel and the users themselves.

State health spending can rise significantly in medical care that is not taken advantage of like this in the long term generates various types of complications in this group of patients, production of unused medications, previously planned consultations that are not carried out, increased interventions surgical, hospitalizations and increased use of emergency services such as intensive care. The WHO report indicates that the interruption or abandonment of a therapy increases, in conservative calculations, at least 20% the costs of public health (Martín Alfonso, 2006). Thus, therapeutic adherence can have a protective role, since it is a behavior that contributes to the non-progression of the disease, favors its control, avoids complications, and improves life expectancy in patients who present this pathology and their instead, it generates advances in the health sector economy, avoiding inappropriate spending (Martín Alfonso, 2006).

The object of study focuses on patients with type two diabetes mellitus, due to the difficulties of the population to comply with their treatment, as well as the impediments to access medical controls. The field of research is immersed in public health, mainly in the second level of care given that this is the healthcare area in the management of patients diagnosed with diabetes that is responsible for preventing the exacerbation of the disease, formed by the medical professional and nursing, both participating in a coordinated way that allow the patient to perceive teamwork, to guarantee comprehensive care, the general objective of determining the factors that intervene in the deficiency of therapeutic adherence in people with non-insulin-dependent diabetes mellitus and the repercussions on the quality of life, being the hypothesis the factors that intervene in the deficit of the therapeutic adherence generate negative repercussions for the health and increase in the public cost.

II. MATERIAL AND METHOD

The research work is of a qualitative type, with a cross-sectional cohort in the period between January, February and March 2018. For the development of the research, the historical-logical, deductive-inductive, analytical

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theoretical methods were used - synthetic and descriptive. Surveys were applied to non-insulin-dependent diabetic users, a technique that was used at the Verdi Cevallos Hospital in the city of Portoviejo, in those patients who came to the outpatient area for their medical appointment and in the respective homes of patients previously identified by medical records. Also, the interview was applied as a data collection technique, which was addressed to the professional specialized in internal medicine with a subspecialty in diabetes who works in this health facility.

The study universe consisted of 172 patients suffering from non-insulin dependent diabetes mellitus. The population was sampled with a margin of error of 5% and a confidence level of 95%. In this way, the development of the work was carried out with a total of 118 patients, included in the ranges of 50 to 65 years, of which 82 users attended scheduled appointments with the specialist in the hospital and 36 were located through their home address. Diabetic patients treated between the period of January - March 2018, people with non-insulin-dependent diabetes mellitus older than 50 years of age were included. People under 50 years of age were excluded.

III. Analysis and Discussion

The results of the survey are presented and discussed in Figure 1, together with the information obtained from the interview with the specialist in diabetes.

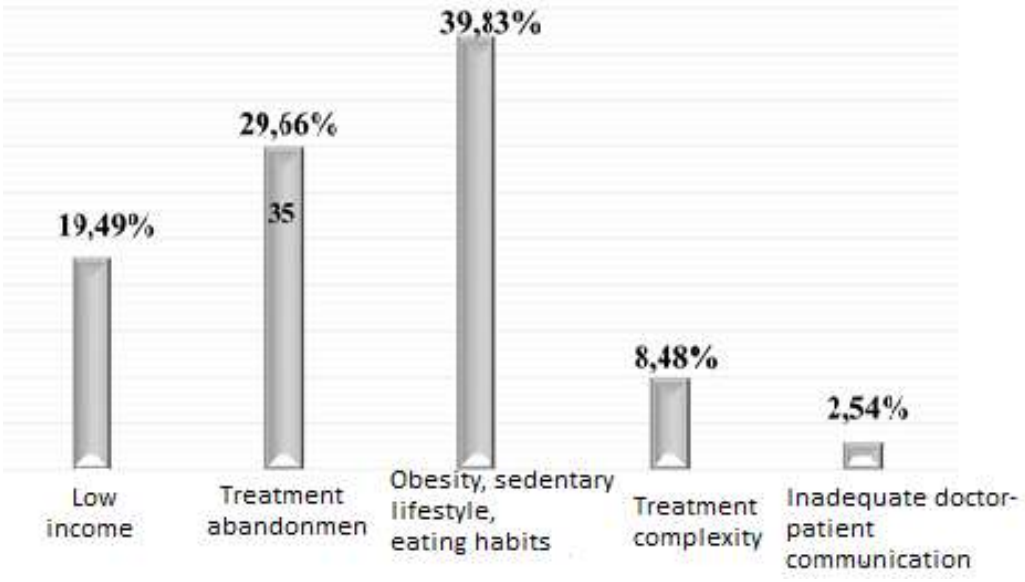

Figure 1: Factors that affect Therapeutic Adherence

As shown in Figure 1, obesity, sedentary lifestyle and poor eating habits are the most widely considered factor for patients with diabetes mellitus (39.83%). The second most considered factor is the abandonment of treatment by the patient (29.66%) followed by low economic income (19.49%). According to the criteria of the diabetes specialist interviewed, the factor that most affects therapeutic adherence is the acceptance of the disease, since a patient feels healthy and neglects treatment even though their blood glucose levels are not controlled.

According to research, 44.9% of patients sometimes meet the indications recommended by the doctor, while only 29.6% maintain active participation. This may be because the patient adheres to monotony, knowing what

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medications to take and what routines to adopt, this being one of the main reasons why patients do not seek medical attention.

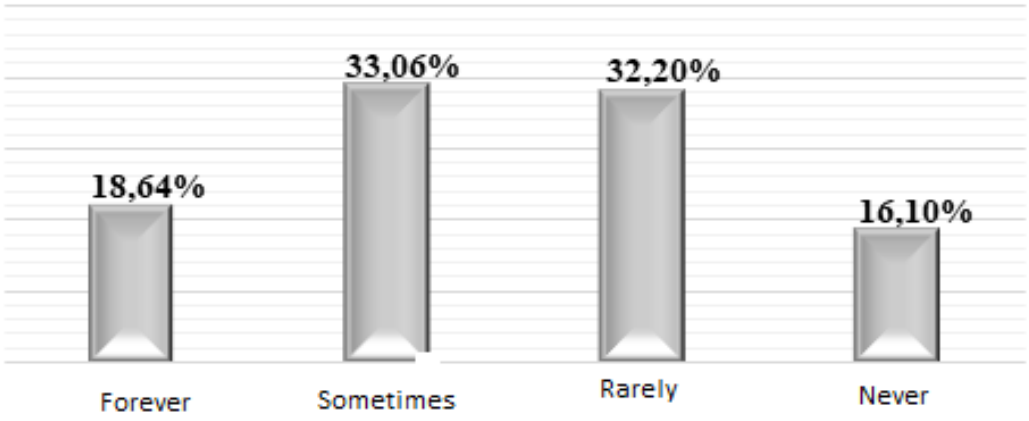

Figure 2: Communication with your Doctor when you do not Comply with the Treatment

According to Figure 2, only 18.6% of patients always report to the doctor when they have failed to comply with treatment, 33.06% do it sometimes, 32.20% do it rarely, and 16.1% do not. The reason for this behavior is so as not to harm the doctor-patient relationship. However, for the specialist in diabetes, this deficit is reflected in the complementary examinations, that is, that for the patient the reality of his illness is difficult to hide. Concerning the question about the patient's reaction to being diagnosed with the disease, 43.2% felt depressed, while 33% felt anguish against the expectation of what the situation will be like after the diagnosis. For the specialist in diabetes, to learn to coexist with the disease, the patient must focus on changes that generate healthy lifestyles.

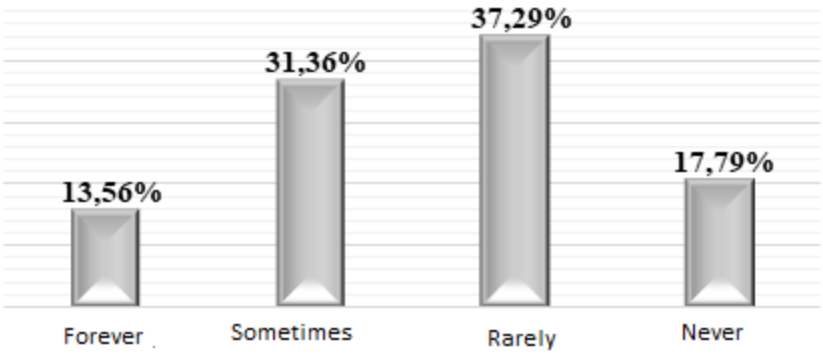

Figure 3: Post-consultation Carried out by the Nursing Professional

According to Figure 3, 37.29% of patients rarely receive information after consultation with the doctor. Similarly, 31.36% of patients state that they only sometimes receive information. 17.79% say they have never received a post-consultation and 13.56% say they have always received it. In the Verdi Cevallos Hospital, post-consultation is carried out electronically. Given the demand of patients, these many times are not met and sometimes it is because the patient leaves the institution once his appointment is finished, without receiving the corresponding education from the nursing staff, which response to the task. scientific number three.

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IV. CONCLUSION

The patients do not acknowledge that they do not comply with the treatment, in addition to minimizing the level of adherence to healthy lifestyles, demonstrating in the examinations that they do not comply with the doctor's instructions, a different picture is reflected then that expressed in the consultation.

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